

Drinking Water Emerging Contaminants

**11th Annual Groundwater Conference
June 8, 2011**

Presenter: Dennis Harrison

Goal: Provide latest information concerning new or changing contaminants affecting Alabama's Drinking Water Program.

Contaminant List

- Disinfection By-Products
- Flouride
- Hexavalent Chromium
- Perchlorate
- PFOA and PFOS



Disinfection By-Products

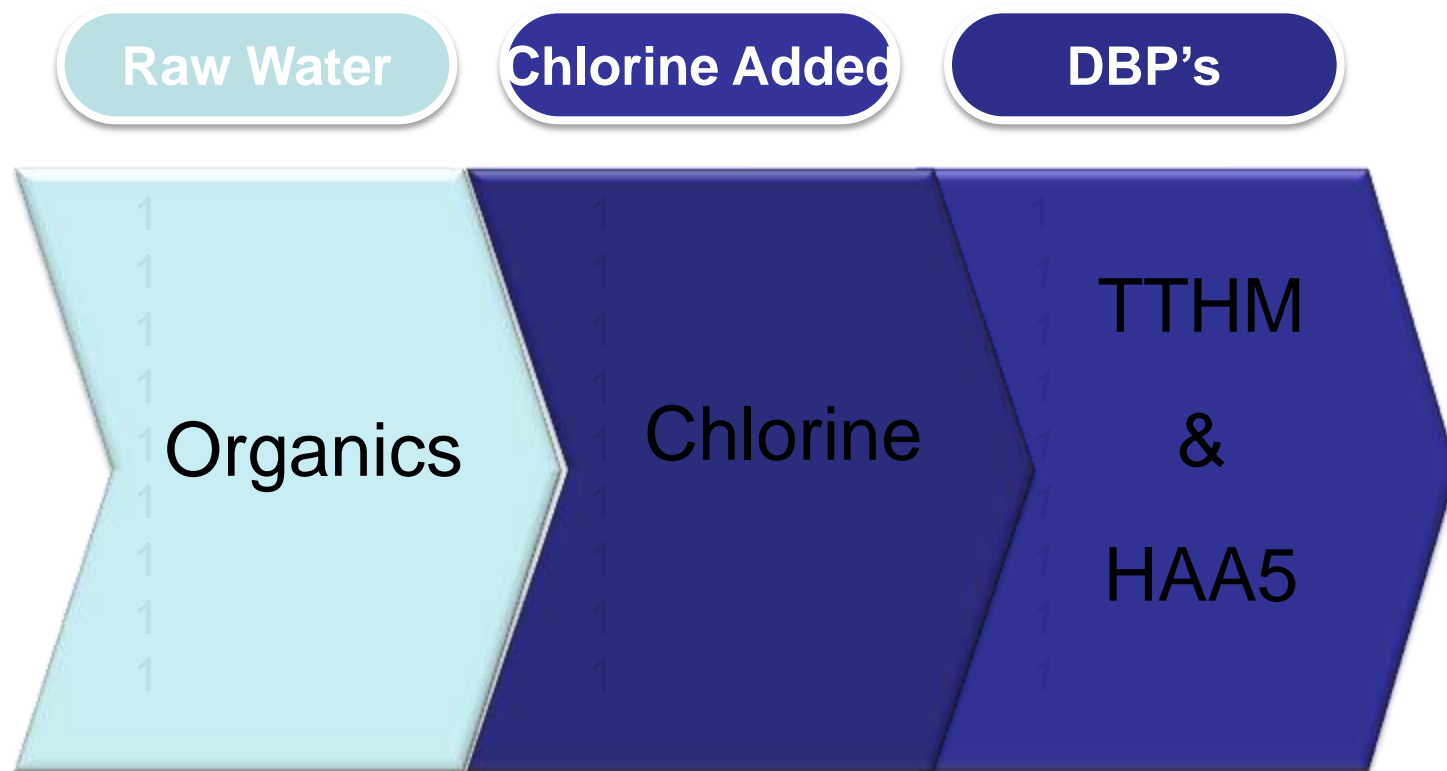
Compliance Deadline: January 1, 2012

All sites must meet:

80 ppb for TTHM

60 ppb for HAA5

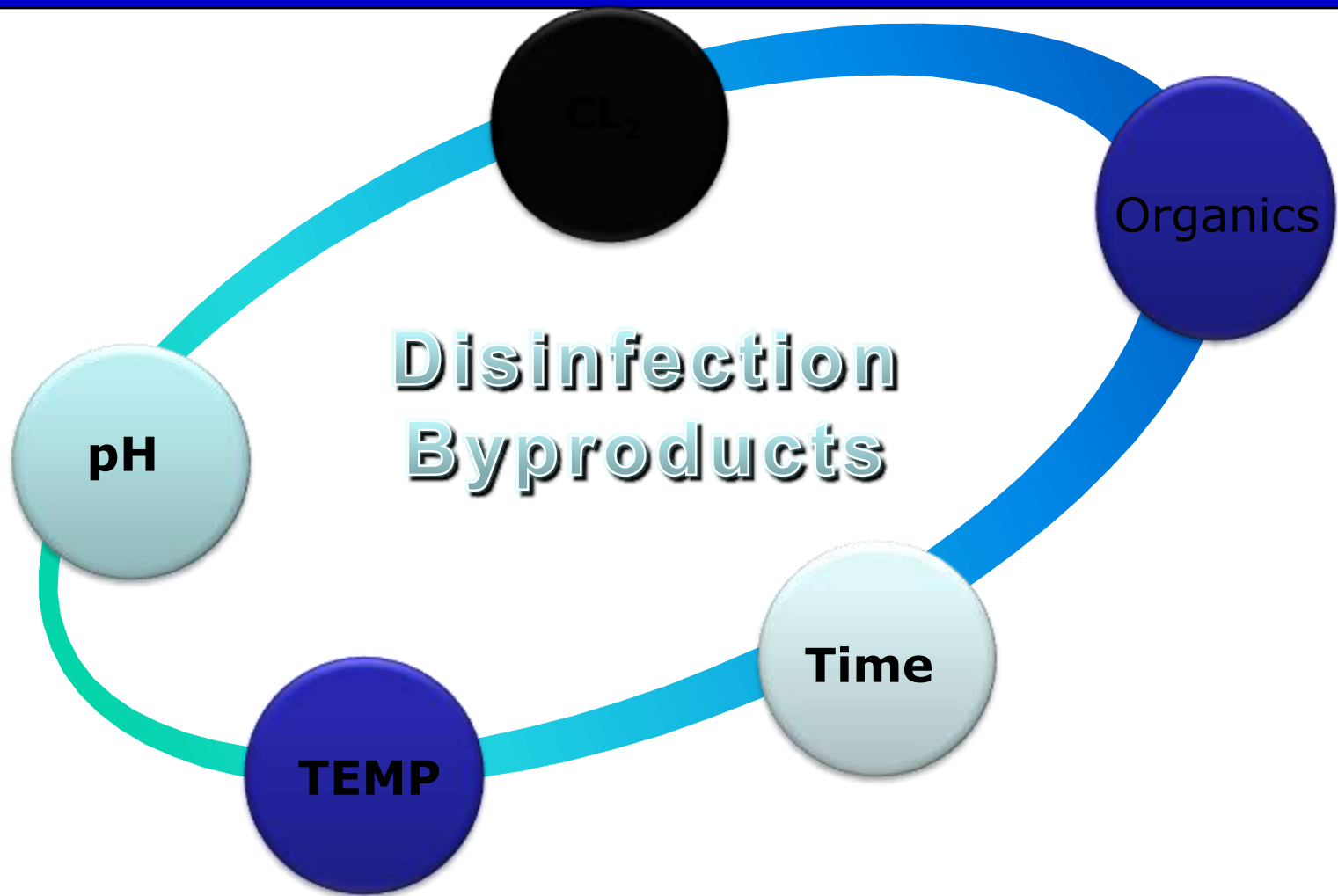
DBP Formation



Regulated DBPs Formed During Chlorination

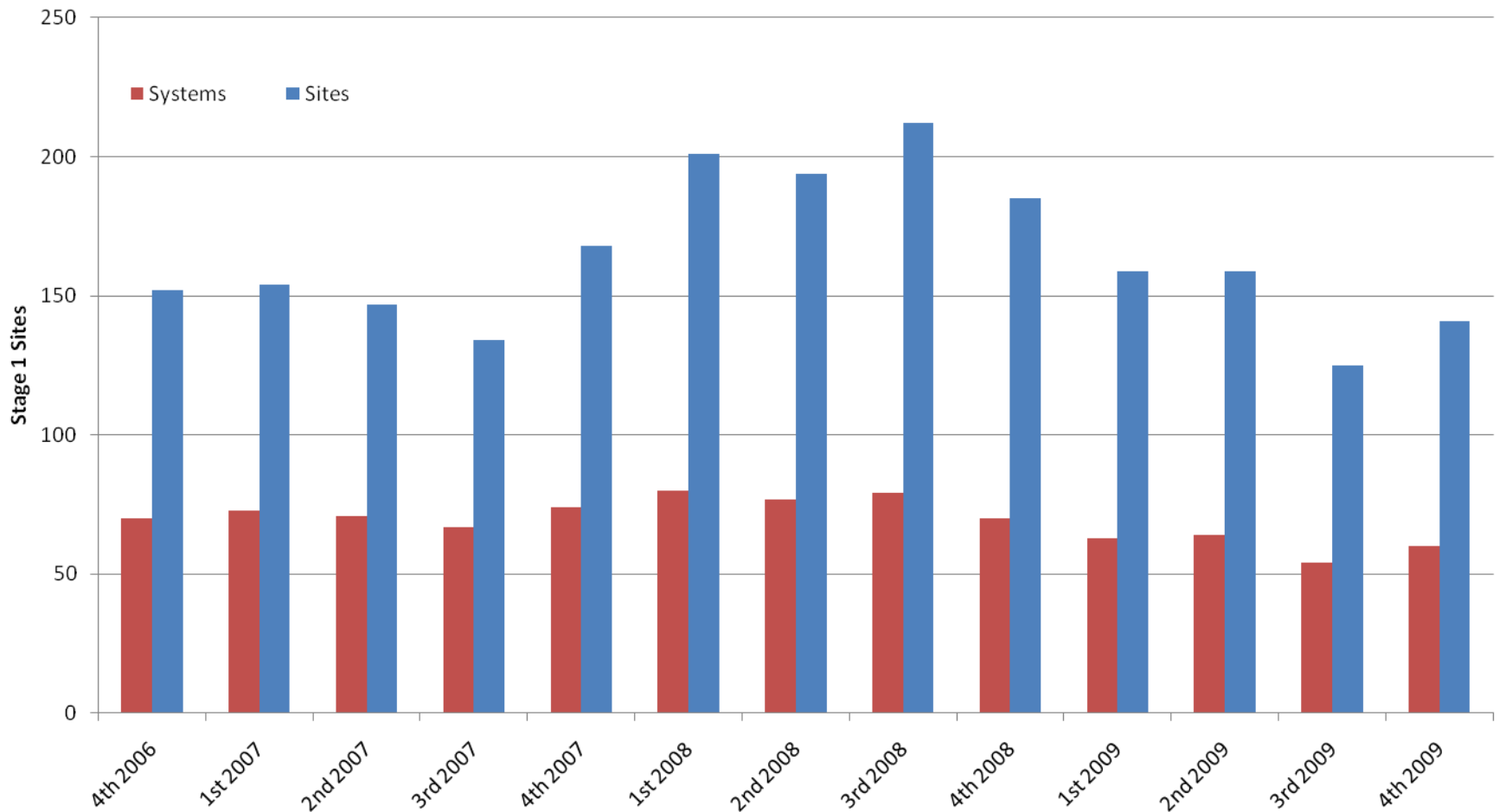
DBP Class	Individual DBP Species	Chemical Formula
Trihalomethanes *	Chloroform	CHCl_3
	Bromodichlormethane	CHCl_2Br
	Dibromochloromethane	CHClBr_2
	Bromoform	CHBr_3
Haloacetic acids*	Monochloroacetic acid	CH_2ClCOOH
	Dichloroacetic acid	CHCl_2COOH
	Trichloroacetic acid	CCl_3COOH
	Monobromoacetic acid	CH_2BrCOOH
	Dibromoacetic acid	CHBr_2COOH
*		

What Affects DBP Formation?



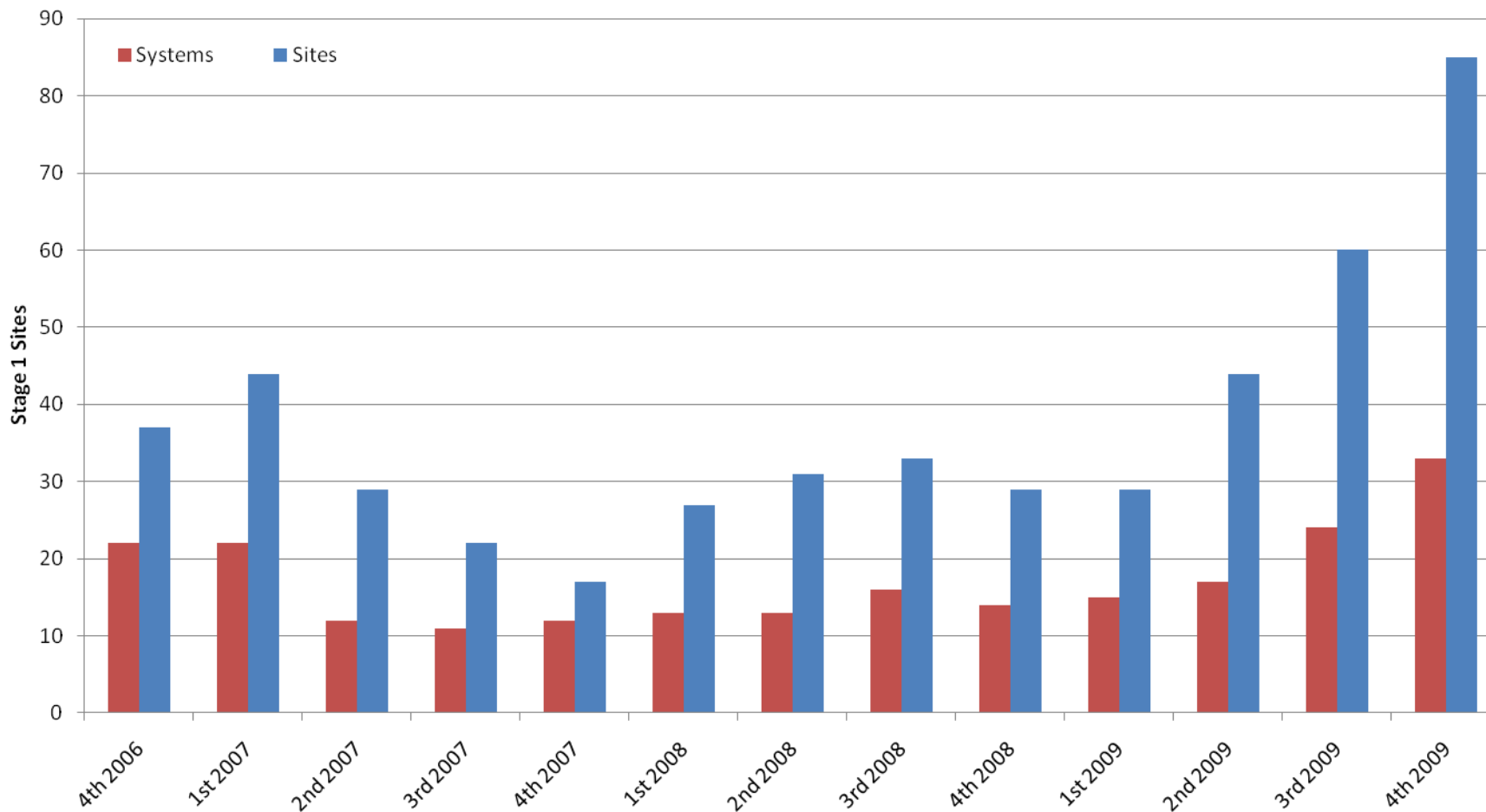


2012 TTHM Non-Compliance Estimates





2012 HAA5 Non-Compliance Estimates



- Compliance with new MCL starts 1/1/2012
- 20 – 25% of water systems expected to be in violation by the end of 2012.
- MCL violations require public notice within 30 days and includes the word **“CANCER”**.
- Most public notices will be due right before Christmas 2012.

- Occurs naturally and is added to drinking water by many public water systems.
- In 2006 National Research Council recommended EPA conduct a new risk assessment.
- EPA has not yet determined whether or not to revise the current MCL.

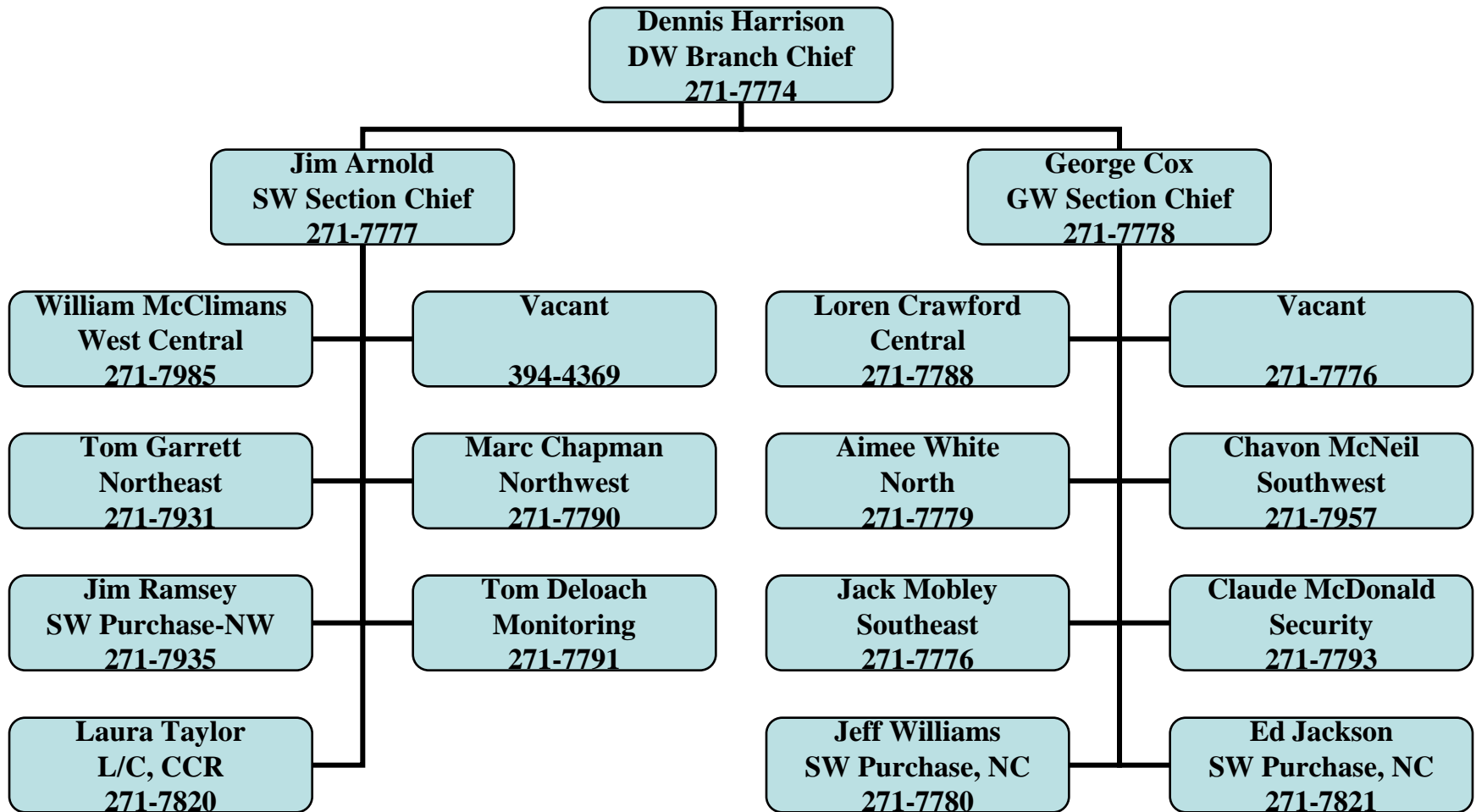
- Total Chromium is regulated. MCL is 100 part per billion.
- EPA encouraging PWSs to monitor for Cr6.
- Cr6 occurs naturally and is man-made.
- California has established an MCL for Cr6.
- California's Cr6 MCL is 60 parts per trillion.

- EPA issued regulatory determination to initiate process of regulating perchlorate in February 11, 2011.
- EPA will publish a proposed regulation in Federal Register for public comment within 24 months.
- After consideration of public comments EPA expects to promulgate a final regulation within 18 months.

- Perfluorooctanoic Acid – PFOA
Provisional health standard of 0.4 ppb.
- Perfluorooctanoic Sulfonate – PFOS
Provisional health standard of 0.2 ppb.
- Both compounds are entirely man made.
- Both compounds are by-products of Alabama industries.



Drinking Water Branch Staff





Summary

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